

Claims 3-8 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. The examiner noted that the claims need not be amended, but instead, a reference to the specification can be included in the remarks. Accordingly, in order to advance the prosecution of the present application, Applicants shall provide a summary of the pertinent disclosure including citation to examples supporting the claimed subject matter.

In their 1987 continuation-in-part specification, applicants disclose "an integrated system of programming communication" which encompasses many inventions and deliberately includes many embodiments. Their teaching technique is to introduce the principles of their integrated system in a series of *related* examples. Each example builds upon structure and principles introduced earlier. Examining basic principles in detail in early examples, enables the specification with concreteness to expand and extend the scope of the teaching in later examples.

Starting with "**One Combined Medium**" on page 19 which focuses on the creation and delivery of a receiver specific graph in a broadcast or cablecast television program, "Wall Street Week," the specification introduces concepts of personalization of mass media and broadcast control of receiver station computing equipment. At page 28 *et seq.* it describes apparatus that include signal processors and signal decoders and introduces the concept of a signal processor *system*. At page 40 *et seq.* it teaches the composition of signal information and the organization of message streams.

Then in a series of four **examples, #1 through #4** which begin on pages 108, 143, 162, and 197 respectively, the specification demonstrates how receiver stations communicate signal processor apparatus and methods ("SPAM") processor code and data of the integrated system of programming communication to *some* apparatus they actuate, how decryption occurs, how metering and monitoring take place, and how actuated apparatus perform. Each example builds on concepts introduced earlier in the specification to provide a detailed teaching of its own subject matter, and a particularly important teaching occurs from pages 156 through 162 where the specification teaches the structure and operating capabilities of a *controller of a decoder*.

Building on all that precedes it, **example #5**, which begins on page 248, then relates how the integrated system processes a multichannel communications system, which conveys different types of signals, in order to monitor programming availability and enable receiver station apparatus to receive desired programming.

From pages 278 through 312, in **example #6** and especially **example #7**, which includes both digital and analog television signals and relates to the "Wall Street Week" program (and which has further disclosure at pages 427 through 447), the specification teaches regulating reception and use of programming of the integrated system of programming communication.

At page 312 *et seq.* it relates further monitoring concepts.

From page 324 through page 390 the specification teaches a series of transmitter station and transmitter network concepts. This portion of the specification also relies on all previous disclosure in that special attention is given to intermediate transmission stations which, *as receiver stations*, respond to programming transmissions of the integrated system as well as storing, organizing, generating, and transmitting programming. At page 340 *et seq.* **example #8** teaches distribution to, storage and organization at, and retransmission from intermediate transmission stations ("ITS") of SPAM programming -- most specifically television spot commercials. At page 354 *et seq.* **example #9** teaches automating intermediate transmission station combined medium operations by describing how an intermediate transmission station responds to an intermediate generation set and other elements of the integrated system to generate processor code and data and transmit the code and data with SPAM programming -- spot commercial unit Q of example #8 -- all of which are subsequently shown in the specification to operate at receiver stations to deliver receiver specific programming at video monitors, speakers, printers, and transmitters (telephones which communicate to remote data collection stations). At page 374 *et seq.* **example #10** extends the transmitter and network automating concepts of examples #8 and #9 by disclosing *a plurality* of intermediate transmission stations generating processor code and data, in the fashion of example #9, and inserting different code and data into a *network originated* transmission of SPAM programming -- again the unit Q television spot commercial.

From page 390 through 516, the specification discloses further ultimate receiver station ("URS") automation concepts, including regulating the URS environment (page 396 *et seq.*), controlling multiple receivers and output devices to present coordinated output (page 406 *et seq.*), receiving selected programming of the integrated system (page 419 *et seq.*), certain *integrated system computer system concepts* (page 427 *et seq.*), whose **example #7** (page 427 *et seq.*) description relies on the receiving selected programming concepts of pages 419-427. At page 447 *et seq.* the specification discloses certain data maintainence, timing control, efficiency, and other concepts involved in controlling combined media operations. At page 457 *et seq.* the specification discloses certain timing, imaging, communication, and transmission processing concepts that relate to efficient delivery of intergrated system programming. At page 463 *et seq.* the specification relates to user specific audio, print, and other combined media besides receiver specific video. With all this preparation, the specification is finally able to teach, from page 469 through page 516, the combined media presentation of **examples #9 and #10** at a plurality of ultimate receiver station (which are responding to signals sent by different intermediate transmission stations). At page 516 *et seq.* the specification discloses enhancing and extending functionality of the integrated system by reprogramming receiver apparatus and enabling receiver stations to process transmissions having new forms of composition.

Finally, at page 533 *et seq.* the specification discloses "**Summary Example**" (#11) which teaches a very large scale integrated data processing and communications problem and its solution(s), using *all of* the disclosed integrated system with iterative broadcasting, response, and refinement.

Because of the integrated nature of the disclosure, no part of the specification is intended to be considered *in isolation*. However, in the present application, the examiner's attention is directed to the specification at:

pages 326, line 30 to page 327, line 4;

page 329, lines 2-22; and

page 330, line 5 to page 334, line 6 (especially page 332, line 4 to page 333, line 8).

Applicants provide these specific embodiments in support of the pending claims as by way of example only. The claims must be read as broadly as is reasonable in light of the specification, and Applicants in no way intend that their submission of excerpts/examples be construed to unnecessarily bound the scope of the claimed subject matter.

Claims 3-8 are rejected under 35 U.S.C. § 102(b) as being anticipated by Cox et al. Claim 3-8 relate to a method for storing programming comprising the steps of storing a programming requirement signal and locating an available storage space for the programming based on the step of storing a requirement signal. Cox fails to disclose the claimed locating step of claim 3 and either of the effecting steps of claim 8. In particular, and by way of example only, the specification at page 331, line 21, et seq. describes the locating step.

Four spot commercials--program units Q, Y, W, and D--are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first. According to the schedule recorded at computer, 73, Q should play first on the cable channel modulated by cable channel modulator, 83; then subsequently Y and W should start to play simultaneously on the channels modulated by modulators, 83 and 87 respectively; then D should play on the channel modulated by modulator, 83, immediately after Y ends. Caused to organize the locations of said units to play according to said schedule, computer, 73, determines automatically, in a predetermined fashion, that units Q, Y and D should be recorded on the tape loaded on recorder, 76, with Q recorded first and D recorded immediately after Y. In a predetermined fashion, computer, 73, determines that insufficient available space exists on the tape on recorder, 76, to record Y immediately before D or on recorder, 78, to record D immediately after Y. So determining causes computer, 73, automatically to locate a place on the tape loaded on recorder, 78, that contains sufficient space for recording D. . . . Automatically, computer, 73, verifies that the space is truly available by causing recorder, 78, to move forward or rewind to the start of the located space then to play for the duration of the space; by causing decoder, 79, simultaneously to search for embedded SPAM message information, detect said information, and transfer said information to computer, 73; and by checking the detected SPAM information in a predetermined fashion to ensure that detected meter-monitor information does not identify a program unit that is scheduled to be transmitted at a future time. Determining said located space to be available causes

computer, 73, to cause recorder, 76, to move forward or rewind to the start of program unit D; to cause recorder, 78, to rewind to the start of said located space; and to cause switch, 75, to configure its switches so as to transfer the output of recorder, 76, to the input of recorder, 78. Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record for the duration of program unit D. Then automatically, in a predetermined fashion, computer, 73, alters the records it contains to reflect the location of unit D on recorder, 78, and that the space on the tape on recorder, 76, that program unit D had occupied is now available and may be recorded over.

Cox, on the other hand, does not locate storage space, as claimed. Rather, Cox receives storage data as part of the control data. In particular, Cox transmits a memory page address byte that identifies the memory page of the multi-page memory of decoder 22 at which the subsequent teletext page is to be stored. The transmitted teletext page is stored at a memory page in decoder 22 corresponding to the memory page address of row 24. (Col. 4, lines 25-40.) Thus, Cox stores the incoming programming without regard to available programming storage space, as claimed. Further, there is nothing in Cox that would teach or even suggest locating available storage space. Accordingly, applicants submit that claims 3-8 are not anticipated by Cox et al. and respectfully request reconsideration of the rejection of claims 3-8 under 35 U.S.C. §102(b).

Claims 3-8 are twice rejected under the judicially created doctrine of non-obviousness, non-statutory double patenting over the patented claims in U.S. Patents 4,694,490; 4,704,725; 4,965,825; and 5,109,414. As to the double patenting rejections of paragraphs 9-17, applicants' views are fully discussed in applicants' reply brief to the rejections in application number 08/113,329, and that reply brief is incorporated by reference herein. Moreover, the claims of the present application are patentably distinct from the representative claims of U.S. Patents 4,694,490; 4,704,725; 4,965,825; and 5,109,414.

As an initial matter, the examiner's rejection of the present application under the Schneller double patenting theory based on Harvey U.S. Patents 4,694,490 and 4,704,725 is improper because the present application does not claim the benefit of those applications under 35 U.S.C. § 120. Thus, there could never have been a basis for

claiming the present subject matter in those applications. Therefore, the rejection based on Harvey U.S. Patents 4,694,490 and 4,704,725 should be withdrawn.

Moreover, the PTO fails to specifically identify all claims from cited Harvey patents that cover specific claims in the present application. Rather, the Office Action references “representative claims” from patents and the present application. The Office Action does not cite specific elements from claims in a patent covering specific elements in claims in the application. In fact, the Office Action acknowledges that the patent claims and application claims are directed to different elements, but states that this “does not prohibit this rejection if there is common or interrelated subject matter recited.” The Office Action then references Schneller in support of this erroneous statement, not supported by Schneller.

The claims in the present application are distinct from the claims in the Harvey patents. As previously mentioned, the Office Action states that the independent and distinct standard was the main factor in the Schneller court’s determination that the double patenting rejection should be affirmed. The Office Action has misinterpreted this phrase. This phrase means independent ‘or’ distinct. MPEP (6th ed.) § 802.01. The MPEP defines independent as meaning “that there is no disclosed relationship between the two or more subjects disclosed” and that they are not connected. The MPEP defines the term distinct as meaning that “two or more subjects disclosed are related . . . but are capable of separate manufacture, use, or sale as claimed . . .” Two or more subjects cannot then be unrelated, independent, and also related, and thus distinct. Analyzing the PTO’s cited representative claims referenced in the Office Action, the claims of the present application are clearly distinct from the claims in the patents and therefore the claims in the present application are patentable. Although not required, applicants will analyze the claims of the present application with respect to the designated representative claims of Harvey U.S. Patents 4,694,490 and 4,704,725.

Claim 8 of the present application is distinct from the first representative claim, claim 7 of U.S. Patent 4,694,490.

Patent 4,694,490 claim 7 recites a method of communicating television program material, said material including a video signal containing a television program and an instruct-to-overlay signal, to multiple receiver stations. The video signal is received and the instruct-to-overlay signal detected and processed by a computer. The computer generates and transmits its overlay video signals, in response to the instruct-to-overlay signal, to a television receiver which presents a combined display of the television program and overlay video signals, said display being specific to a particular user.

Present application claim 8 relates to a method for storing programming comprising the steps of storing a programming requirement signal and locating an available storage space for the programming based on the storing step.

Patent claim 7 is unrelated to storing programming and does not cover present application claim 8. Application claim 8 does not use instruct-to-overlay signals, and does not require a computer to generate an overlay video signal in response to the instruct-to-overlay signal. The two claims are capable of separate manufacture, sale, and use as claimed and, as such, the two inventions are distinct.

<u>U.S. patent 4,694,490, claim 7</u>	<u>Present application, claim 8</u>
<p>In a method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay video signals, to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to</p>	<p>8. A method for storing programming at a programming storage station, said storage station having a storage device capable of storing programming, and an automatic control unit for controlling said storage device to store information, said method comprising the steps of:</p> <p>(1) receiving said first programming to be transmitted;</p> <p>(2) receiving an instruct signal which is effective to accomplish one of:</p> <p>(a) effecting a transmitter</p>

modify the overlay video signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, and wherein a video signal containing a television program signal and an instruct to-overlay signal are transmitted to said receiver stations, the steps of:

receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations

detecting the presence of said instruct-to-overlay signal at said selected receiver stations at a time when the corresponding overlay is not being displayed, and coupling said instruct-to-overlay signal to the computers at said selected receiver stations, and

causing the computers at said selected receiver stations to generate and transmit their overlay video signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a combined display at the selected receiver stations consisting of the television program and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.

station to generate a programming requirement signal which is effective to enable said transmitter station to locate an available programming storage space in which to store said first programming; and

(b) effecting a receiver station to generate a programming requirement signal which is effective to enable said receiver station to locate an available programming storage space in which to store said first programming;

(3) receiving a transmitter control signal which operates at said transmitter station to communicate said first programming to a transmitter; and

(4) storing said instruct signal and said transmitter control signal.

Claim 8 of the present application is distinct from the second representative claim, claim 3 of U.S. Patent 4,704,725.

Patent 4,704,725 claim 3 recites a method of communicating output signals comprising data and user specific signals at a multiplicity of receiver stations from computers to output devices. At least some of the computers can modify the user

specific signals by processing modification control signals. The computers communicate the data and user specific signals in response to a received and detected instruct-to-transmit signal.

Present application claim 8 relates to a method for storing programming comprising the steps of storing a programming requirement signal and locating an available storage space for the programming based on the storing step.

Patent claim 3 does not relate to storing programming and does not cover present application claim 8. Application claim 8 does not modify control signals, and does not require a computer to modify the signals. The two claims are capable of separate manufacture, sale, and use as claimed and, as such, the two inventions are distinct.

U.S. patent 4,704,725, claim 3

A method of communicating data to a multiplicity of receiver stations each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of:

transmitting an instruct-to-transmit signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device;

detecting the presence of said instruct-to-transmit signal at selected receiver stations and coupling said instruct-to-transmit signal to the computers associated with said selected stations, and

causing said last named computers

Present application, claim 8

8. A method for storing programming at a programming storage station, said storage station having a storage device capable of storing programming, and an automatic control unit for controlling said storage device to store information, said method comprising the steps of:

(1) receiving said first programming to be transmitted;

(2) receiving an instruct signal which is effective to accomplish one of:

(a) effecting a transmitter station to generate a programming requirement signal which is effective to enable said transmitter station to locate an available programming storage space in which to store said first programming; and

(b) effecting a receiver station to generate a programming requirement signal which is effective to enable said receiver station to locate an available programming storage space in

to generate and transmit their user specific signals to their associated output devices in response to said instruct-to-transmit signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.

which to store said first programming;

(3) receiving a transmitter control signal which operates at said transmitter station to communicate said first programming to a transmitter; and

(4) storing said instruct signal and said transmitter control signal.

Claim 8 of the present application is distinct from the third representative claim, claim 24 of U.S. Patent 4,965,825.

Patent 4,965,825 claim 24 recites a method of generating user specific output information at a multiplicity of receiver stations. Each receiver station is programmed with a special user application and has a computer adapted to generate user specific output information. Each receiver station has an output device to which its computer transmits a user specific signal. At a time when the user specific output information does not exist, an instruct-to-generate signal is transmitted to the receiver stations. In response to the instruct-to-generate signal, the computers generate and transmit to the output devices the user specific output information in user specific signals which are different, "with each output signal specific to a specific user".

Present application claim 8 relates to a method for storing programming comprising the steps of storing a programming requirement signal and locating an available storage space for the programming based on the storing step. It does relate to generating user specific output information. The two claims are capable of separate manufacture, sale, and use as claimed and, as such, these two inventions are distinct.

U.S. patent 4,965,825, claim 24

In a method of generating computer output at a multiplicity of receiver stations each of which includes a computer adapted to generate and transmit user specific output information content and

Present application, claim 8

8. A method for storing programming at a programming storage station, said storage station having a storage device capable of storing programming, and an automatic control unit for controlling said storage device to

user specific signals to one or more associated output devices, with at least one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify said computers' method of processing data and generating output information content, each of said computers, being programmed to accommodate a special user application, the steps of: transmitting an instruct-to-generate signal to said computers at a time when corresponding user specific output information content does not exist, and causing said last named computers to generate their user specific output information content in response to said instruct-to-generate signal, thereby to transmit to each of their associated output devices an output information content and the user specific signal of its associated computer, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.

store information, said method comprising the steps of:

- (1) receiving said first programming to be transmitted;
- (2) receiving an instruct signal which is effective to accomplish one of:
 - (a) effecting a transmitter station to generate a programming requirement signal which is effective to enable said transmitter station to locate an available programming storage space in which to store said first programming; and
 - (b) effecting a receiver station to generate a programming requirement signal which is effective to enable said receiver station to locate an available programming storage space in which to store said first programming;
- (3) receiving a transmitter control signal which operates at said transmitter station to communicate said first programming to a transmitter; and
- (4) storing said instruct signal and said transmitter control signal.

Claim 3 of the present application is distinct from the fourth representative claim, claim 15 of U.S. Patent 5,109,414

Patent 5,109,414 claim 15 recites a signal processing system which receives data from a data source and outputs the data to a matrix switch and a detector, control signals are detected within the received data and stored for further processing, and a processor controls the directing functions of (1) the matrix switch which receives the data as input and can direct selected portions of the data to a data transmission means and (2) the device which stores and transfers the control signals to the processor.

Present application claim 8 relates to a method for storing programming comprising the steps of storing a programming requirement signal and locating an

available storage space for the programming based on the storing step and does not relate to receiving data and outputting the data to a matrix switch and a detector.

The two claims are capable of separate manufacture, sale, and use as claimed and, as such, these two inventions are distinct.

U.S. patent 5,109,414, claim 15

In a signal processing system,
a receiver/distribution means for receiving data from a data source and for outputting said data to a matrix switch means and a control signal detector means,
a matrix switch means for receiving said data from said receiver/distributor means and for directing selected portions of said received data to a data transmission means,
a control signal detector means for detecting control signals respecting said data and transferring said control signals to a storage/transfer means, said control signal means being configured to detect said control signals at a predetermined location within said data,
a storage/transfer means for receiving and storing said control signals and for transferring at least a portion of said control signals to a processor means for further processing, and
a processor means for controlling the directing functions of said matrix switch means and the transfer functions of said storage/transfer means based on instructions contained in said control signals.

Present application, claim 8

8. A method for storing programming at a programming storage station, said storage station having a storage device capable of storing programming, and an automatic control unit for controlling said storage device to store information, said method comprising the steps of:
(1) receiving said first programming to be transmitted;
(2) receiving an instruct signal which is effective to accomplish one of:
(a) effecting a transmitter station to generate a programming requirement signal which is effective to enable said transmitter station to locate an available programming storage space in which to store said first programming; and
(b) effecting a receiver station to generate a programming requirement signal which is effective to enable said receiver station to locate an available programming storage space in which to store said first programming;
(3) receiving a transmitter control signal which operates at said transmitter station to communicate said first programming to a transmitter; and
(4) storing said instruct signal and said transmitter control signal.

Claims 3-8 are rejected under the judicially created doctrine of double patenting over the claims of copending U.S. application 08/113,329 and other listed U.S. applications. The rejection should be a provisional rejection until one or more of the copending applications issues, at which time the rejection can be made non-provisional.

Secondly, although the rejection is stated as a judicially created obviousness double patenting rejection, the examiner's arguments are those of a Schneller non-obviousness, non-statutory double patenting rejection. Applicants's reply brief addresses the merits of the Schneller-type rejection.

The examiner's comments on the claims is acknowledged and appreciated. With respect to the assertion, in paragraph 2, that no attempt to will be made to determine the effective filing date of this application, applicant claims priority under 35 U.S.C. § 120 of the following applications:

<u>Serial No.</u>	<u>Filing Date</u>	<u>Patent No.</u>
08/113,329	August 30, 1993	Pending
08/056,501	May 3, 1993	5,335,277
07/849,226	March 10, 1992	5,233,654
07/588,126	September 25, 1990	5,109,414
07/096,096	September 11, 1987	4,965,825

As to the paragraph numbered 3, applicants acknowledge their duty to maintain a line of patentable demarcation between related applications. Assuming, arguendo, that substantially duplicate claims exist, the applicants intend to make a good faith effort to alert the PTO of any instances in which the PTO treats such claims inconsistently.

As to the paragraph numbered 4, applicants acknowledge and appreciate the examiner's concern over the use of alternative claim language. Applicants assert that they believe that the disclosure supports every possible embodiment or permutation that can be created using said language. During the prosecution of this application, applicants intend to ensure that the disclosure supports each possible embodiment claimed using alternative claims.

In paragraph 10, the Office Action states that “determination of a possible non-statutory double patenting rejection obvious-type in each of the related 327 applications over each other will be deferred until a later time.” Applicants submit that the examiner and the PTO cannot defer further rejections to a later time. Every ground of rejection should be made in examiner’s first Office Action. 37 CFR § 1.104(a) states that “[o]n taking up an application for examination . . . the examiner shall make a thorough study thereof and shall make a thorough investigation of the available prior art relating to the subject matter of the claimed invention. The examination shall be complete with respect to both compliance of the application . . . with the applicable statutes and rules and to the patentability of the invention as claimed, as well as with respect to matters of form, unless otherwise indicated.” The MPEP states “[t]he examiner’s action will be complete as to all matters, except that in appropriate circumstances, such as misjoinder of invention, fundamental defects in the application, and the like, the action of the examiner may be limited to such matters before action is made.” MPEP § 707.07, citing 37 CFR § 1.105. Finally, “[p]iecemeal examination should be avoided as much as possible. The examiner ordinarily should reject each claim on all valid grounds available” “Where a major technical rejection is proper, it should be stated with full development of reasons rather than by mere conclusion coupled with some stereotyped expression.” MPEP § 707.07(g). Applicants submit that the examiner has a duty to give each application a complete examination, to make rejections with specificity, and that not to defer rejections. For these reasons, applicants likewise traverse the rejection based on the “judicially created doctrine of double patenting over the claims of copending U.S. application 08/113,329 and the following [list of all applicants copending applications].” Applicants submit that this rejection, even if appropriately made with specificity, should be a provisional double patenting rejection. Applicants respectfully request that this rejection be withdrawn.

As to the grouping of paragraphs numbered 21, applicants acknowledge and appreciate the interviews provided by the PTO. Applicants also appreciate the detailed description of the interviews provided in the Office Action. The Office Action states that “the Group would like to have a complete grouping of applications in a manner

that was submitted earlier for only a portion of the total filings." Applicants note that based on the Office Actions received thus far, the PTO does not appear to be following the groupings applicants submitted previously. The order of examination of applicants' applications do not seem to have any correspondence to the groupings previously submitted. Applicants, therefore, will not supply further groupings. Applicants will, however, gladly supply further groupings if requested by the PTO for the purpose of following these groupings. Mr. Groody has confirmed in a telephone conversation between Mr. Groody and Mr. Scott that no more groupings need be sent.

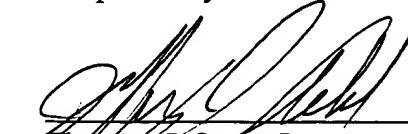
In the interest of maintaining a clear record, applicants respectfully traverse the Office Action's interview summary statement that an offer was made to terminally disclaim the present application with the '81 or '87 patents. Rather, applicants respectfully submit that their offer was to disclaim a block of copending applications against one another, provided their issue date was in close enough proximity so as not to result in unnecessarily great losses in patent term duration.

CONCLUSION

In accordance with the foregoing it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. Further, that all pending claims patentably distinguish over the prior art, taken in any proper combination. Thus, there being no further outstanding objections or rejections, the application is submitted as being in a condition for allowance, which action is earnestly solicited.

If the Examiner has any remaining informalities to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for telephone interview to discuss resolution of such informalities.

Respectfully submitted,

 Ray # 32, 680

Date: April 29, 1997
HOWREY & SIMON
1299 Pennsylvania Avenue, NW
Washington, D.C. 20004
Tel: (202) 383-6614

Thomas J. Scott, Jr.
Reg. No. 27,836
Attorney for applicants